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TRAINING NEEDS ANALYSIS REPORT
FOR THE
VISIBILITY AND MANAGEMENT OF
OPERATING AND SUPPORT
COSTS PROGRAM (VAMOSC)

February 1984

Prepared for
HEADQUARTERS AIR FORCE LOGISTICS COMMAND
MM (VAMOSC)
WRIGHT-PATTERSON AFB, OHIO
under Contract F41608-82-D-A012

ARINC Research Corporation
a Subsidiary of Arinc Incorporated
2551 Riva Road
Annapolis, Maryland 21401

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TRAINING NEEDS ANALYSIS REPORT
ON
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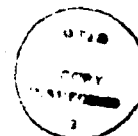OPERATING AND SUPPORT COSTS (VAMOSC) PROGRAM

FEBRUARY 1984

Prepared for

HEADQUARTERS AIR FORCE LOGISTICS COMMAND
MM(VAMOSC)
WRIGHT-PATTERSON AFB, OHIO

under contract F41608-82-D-A012

by

R. A. Ehrensberger

ARINC RESEARCH CORPORATION
a subsidiary of ARINC Incorporated
2551 Riva Road
Annapolis, Maryland 21401

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SECTION ONE

INTRODUCTION

ARINC Research Corporation, under Contract F41608-82-D-A012-005, conducted a training needs analysis for the Visibility and Management of Operating and Support Costs (VAMOSC) Program Office, Headquarters Air Force Logistics Command, Wright-Patterson Air Force Base, Ohio. The period of performance for this task was October 1, 1983 through February 10, 1984.

1.1   BACKGROUND

Under direction of the Department of Defense (DoD), VAMOSC is a tri-service, dynamic program to manage operating and support costs of weapon systems. It is to be used by cost analysts, budget analysts and other personnel in the cost community who are interested in measuring operating and support costs. In order to use the VAMOSC program correctly, the users must fully understand its purpose, the data it contains, and how this data can be used to support their job functions.

1.2   STATEMENT OF PROBLEM

Since its inception, the Air Force portion of the VAMOSC program has had a problem with acceptance by the user community. Many reasons have been hypothesized for the lack of use of the system, but no formal study had been undertaken to determine the reasons for non-use and to recommend solutions. Therefore, the Air Force (AF) VAMOSC Program Office contracted with the Educational Systems Program of ARINC Research Corporation to complete two tasks: first, to conduct a Training Needs Analysis, and second, to develop a formal Training Plan for the VAMOSC program.

1.3   PURPOSE OF ANALYSIS

The objectives of this analysis were to:

1) determine the reasons why the identified users in the AF cost community were not employing VAMOSC data in their work, and

2) recommend actions that can be taken by the AF VAMOSC Program Office to remedy the situation.

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APPROACH

2.1   GENERAL

The project commenced October 1, 1983 and was completed February 10, 1984. Data was collected from users in the field and analyzed. As a result of the analysis, actions have been recommended to solve those problems that were found to have a training solution.

2.1.1 Task 1

Task 1 involved an in-depth review of the User Manuals, AFR 400-31, Vol. I-IV, to gain a better understanding of the program and to assess their adequacy for use by a novice VAMOSC user. All other pertinent documentation, such as Executive Summaries, User Surveys, and training plans, was also reviewed and evaluated. A Needs Analysis interview form (See Appendix A) was then developed. It was designed to cover three specific areas: The users' understanding and use (or intended use) of VAMOSC, their reaction to the User Manuals, and the training they had or had not received on the VAMOSC program. A list of users, including both government and contractor, was obtained from the VAMOSC Program Office and arrangements were made to meet with each individual at their plant in order to record their reactions to VAMOSC on the interview form. Appendix B lists the names, office symbol, and location of each person interviewed.

2.1.2 Task 2

Under Task 2, the results of Task 1 will be used to write an AF VAMOSC Training Plan. This task will commence with the acceptance of the Task 1 report by the VAMOSC Program Office.

2.2   TASK 1 ANALYSIS RESULTS

Forty VAMOSC program users (twenty-six government personnel and fourteen contractors) were interviewed. They were questioned, using the interview forms, about their understanding of the VAMOSC program, their attitude toward it, and how they presently use VAMOSC (or plan to use it) in performing their job functions. The detailed results of these interviews follow.

2.2.1 VAMOSC Utilization

The primary uses of VAMOSC data by the interviewees are to:

- o   develop cost estimating relationships (CERs)

- o   support engineering change proposals (ECPs) and engineering design studies

- o   do comparative analyses

- o   predict life-cycle costs of weapon systems

- o   develop independent cost analyses

- o   develop operating and support cost estimates for DSARC reviews

Thirty-three percent of the total number of interviewees have used, or are presently using, the VAMOSC data (Table 1). Twenty percent of these users are contractors while only thirteen percent of the government personnel interviewed have ever used VAMOSC data in their work.

Table 1: Analysis Results

Number of personnel interviewed.............................40

- o   VAMOSC Users...............................33%
- o   AFR 400-31, Vo. I-IV available to
   users.....................................70%
- o   Attended Users' Conference................43%
- o   Requested Training........................88%

The users expressed the following complaints about VAMOSC:

- o   Too much time to receive a requested report.

- o   Too much time and effort expended to request a report. (This is specific to contractors. They felt there is too much "red tape" involved in the process.)

- o   Too many inconsistencies in the report data.

- o   Too much work required to use the VAMOSC data. (This is due to the skepticism about the validity of the data. Users felt they had to determine if the data was credible through comparisons, etc.)

2.2.2 VAMOSC Nonutilization

For the remaining sixty-seven percent of the interviewees who did not use VAMOSC, lack of knowledge about the VAMOSC program was the major reason cited. The majority of the government personnel interviewed knew little, or nothing, about VAMOSC. All those interviewed had heard about it and knew that it related to their job function in some way, but no one really knew how. Many people stated that VAMOSC might be a good program, but they did not know how to use it. Typical responses were:

o   "Everyone has impressions of what VAMOSC is, but no one knows for sure if their impression is correct."

o   "We are looking for a better vehicle to defend our costs. If information were available on VAMOSC we might use it."

o   "I need to understand the VAMOSC program before 1 can make a judgement about it."

Other stated reasons for nonuse of VAMOSC were the:

o   lack of data

o   lack of confidence in the available data

The lack of data response was due to either too few years of available data or missing data elements. The lack of confidence in the data was closely intertwined with lack of knowledge. Many people had cursorily inspected the reports and dismissed them. They did not understand the objectives of the VAMOSC program, the type of data in the data base, or the source of the data. They did not know how they could use the data that were available to them through VAMOSC. The end result is that the users did not consider VAMOSC to be a useful tool to aid in performing their jobs. The interviewees continue to use the data bases that they understand and know how to use, such as DO56, the Product Performance System, even though many of these data bases are feeders to the VAMOSC systems.

2.2.3 AF Regulation 400-31, Vol. 1-1V

Seventy percent of the interviewees had access to the User Manuals, AFR 400-31, Vol. I-IV, at their place of work (see Table 1). However, only forty-five percent had taken the time to look at them and only a very small percentage had actually read them. The primary use for the Manuals was to find out how to obtain a report from the VAMOSC Program Office. Most of the interviewees stated that the Manuals are confusing and hard to read. They are not thought to be user-friendly.

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2.2.4 Training

The interview results in the area of training included the following points:

o   One hundred percent of the government personnel interviewed stated that they needed training on the VAMOSC program

o   Sixty-four percent of the total number of contractors interviewed requested training

o   Forty-three percent of the total number of interviewees (government and contractor) had attended a Users' Conference

The majority of the attendees at the Users' Conferences were contractors. Few government personnel have attended, or plan to attend a Users' Conference. Time and travel money prohibit attendance for most government employees who actually are potential users of the system. The government personnel who have attended Users' Conferences are usually in a management role and are not involved in the day-to-day cost analysis or logistics work that would expose them to VAMOSC data on a regular basis. Government supervisory personnel requested training on the VAMOSC program for their staffs at their geographical locations.

SECTION THREE

CONCLUSIONS AND RECOMMENDATIONS

3.1   CONCLUSIONS

Based on the analysis of the data accumulated through the interviews and examination of the VAMOSC User Manuals, it is concluded that three definite problems in the VAMOSC program have a training solution:

1) A skill/knowledge deficiency -- the users do not understand the VAMOSC program and they do not know how to use VAMOSC data.

2) Lack of VAMOSC credibility -- the users do not believe that the VAMOSC data are valid.

3) Lack of motivation -- the users do not understand the advantages of employing VAMOSC data in their work.

3.2   RECOMMENDATIONS

It is recommended that:

1) A VAMOSC training program addressing the identified problems of skill/knowledge deficiency, credibility, and motivation be developed.

2) Training be targeted to address as many of the job functions as possible within the user community.

3) Three levels of training be developed: the executive level, the middle management level, and the technical staff level (Figure 1).

Figure 1: VAMOSC PROGRAM TRAINING RECOMMENDATIONS

Who Should Be Trained?	What Medium Should Be Used For Training?	Where Should Training Occur?
1. Executive Level OSD Air Staff	Videotape with an Executive Summary	At their place of work HQ AFLC/MM (VAMOSC)
2. Middle Management Level (2 and 3 digit personnel within commands) DPML SPO	1. Videotapes: o Orientation o WSSC System o C-E System o CSCS System 2. Users' Conferences 3. User Manuals	1. VAMOSC Program Office Wright-Patterson AFB, Ohio 2. Users' Conferences – Dayton, Ohio
3. Technical Support Level (4 digit personnel within commands) Cost Analysts Logistics Analysts Budget Analysts System Program Managers Equipment Specialists	1. Videotapes (Orientation, WSSC System, C-E System, CSCS System) along with a brief by a VAMOSC representative (3 days). 2. User Manuals 3. Computer-based training 4. Semi-annual newsletter	At Users' geographical locations

3a) Executive level personnel, such as the Office of Secretary of Defense staff, need to be aware of VAMOSC and the importance of operating and support costs to the defense budgeting process. They need to understand the value of developing and maintaining the VAMOSC data base, and the importance of its use in justifying weapon system costs. This level of personnel does not need specifics on how to use the system, the sources of the data, etc. It is recommended that a VAMOSC program orientation videotape be developed for use at this level of training. A written Executive Summary should accompany the videotape so that the viewer has available an additional source of information on the VAMOSC program as a ready reference.

3b) The second level of training will address middle management (2 and 3 digit personnel) within the government, such as supervisors, deputy program managers for logistics, etc. These people need to have a working familarization of the VAMOSC program. Their training program should include a program orientation and, in addition, it should explain the three VAMOSC systems: the Weapon System Support Cost system (WSSC), the Communication-Electronics system (C-E), and the Component Support Cost System (CSCS). It should also explain the data collection methods for VAMOSC, what is contained in the standard reports, and the impact VAMOSC will have on the job functions of their technical staffs.

It is recommended that a training program be developed for this level consisting of the executive level orientation videotape, along with a videotape on each system: WSSC, C-E and CSCS. This level of personnel should continue to be encouraged to attend the Users' Conferences. They should also have available current copies of the User Manuals. Training for this level should be presented by a VAMOSC Program Representative at the Program Office, Wright-Patterson AFB, Ohio, as the need arises.

3c) The third level of training is the most important and the most critical. Here we are addressing the real users of the VAMOSC systems, the technical support staff (4 digit personnel). These are the cost analysts, the logistics analysts, the budget analysts, the system program managers, etc. Personnel at this level seldom attend a Users' Conference and, up until now, have received most of their information on the VAMOSC program by word of mouth or a cursory glance at a report. They need a comprehensive understanding of the VAMOSC program: its purpose, the sources of the data, the data elements, the products, and the utility of the products in relationship to their job functions. Training for this level must be available at the users' geographic locations.

Initial training at this level should consist of the four videotape packages developed for middle management, the User Manuals and briefings on each system. It should be presented by a VAMOSC Program representative in a three day workshop.

Videotape is recommended as the medium for the initial training because it allows for standardization and presentation of program policy, it is widely accepted within the user community as a training medium, and the equipment (a videotape player and monitor) is available for use by the trainer at the users' locations.

4) Once this initial training has been completed, follow-up materials be made available at each location in the form of computer-based training modules. The modules should reenforce the workshop material and present examples of how the VAMOSC data can be used in specific job functions.

Computer-based training is recommended for follow-on training at this level because it allows the users to learn how to use the VAMOSC data in performing their job functions at their own pace and when time permits. They are able to selectively choose modules that are relevant to their work. The modules are always available to the users for reenforcement or new information as the need arises. Users can be trained in their immediate work area on a designated terminal; it is not necessary to leave the work environment to locate special equipment or find a vacant room.

5) New User Manuals be designed and written to address the needs of the user community. The emphasis should be placed on creating user-friendly Manuals. Such things as data elements, acronyms, products, feeder systems, algorithms, the CAIG format, etc. must be defined and explained in terms a novice VAMOSC Program user can readily understand and relate to his job function. The information must also be made easily accessible to the user.

6) The Users' Conferences be continued on a semi-annual basis as a means to provoke discussion, notify users of changes, and to provide the VAMOSC program with some much needed Public Relations. Contractors will continue to attend these conferences to obtain much of their knowledge of the VAMOSC program. (It is also suggested that contractors be invited to attend training given at government facilities in their geographic locations).

7) A semi-annual (or annual) newsletter be written by the VAMOSC Program Office to explain changes and improvements that are made to the system. This newsletter should be distributed to all levels of users of the system, both government and contractor personnel. It is important that communications be maintained with the users to maintain a positive image of the system as it continues to mature.

SECTION FOUR

SUMMARY

In examining the data collected during the interviews, it became clear that the people who needed to know the most about the VAMOSC program, actually knew the least. A comprehensive training program will do much to alleviate the reasons for nonutilization of VAMOSC: lack of knowledge of the VAMOSC program, lack of data, and lack of confidence in the data.

In order to establish VAMOSC as a credible program within the user community it is important that open communications be maintained between the VAMOSC Program Office and the users. If training is developed and updated as the VAMOSC system matures, the user will be able to selectively and positively use VAMOSC to support his job functions.

APPENDIX A

INTERVIEW FORM

Date_____

Name_____

Organization/Office Symbol_____

Address_____ __ _____

Telephone_____

Job Description_____

_____

A. <u>VAMOSC System</u>

1. Do you presently use the VAMOSC system?

_____
_____
_____

2. VAMOSC has three major systems: the Weapons Support Cost System, the Communications-Electronics System, and the Component Support Cost System. Which system is most relevant to your work?

_____
_____
_____

3. For what purpose do you utilize the VAMOSC system?

_____
_____
_____

4. Are you satisfied with the system performance?

_____
_____
_____ _____

5. If you do not presently use the system, have you ever used it?

_____
_____
_____

A-1

6. Is there a reason(s) why you do not use the system?

_____
_____
_____

7. If you do not use the VAMOSC system, how do you obtain this type of cost data?

_____
_____
_____

8. Do you plan to use this system in the future?

_____
_____
_____

9. Do you utilize the standard VAMOSC system reports which you receive from the VAMOSC Program Office?

_____
_____
_____

10. Is the information you receive useful?

_____
_____
_____

11. Are the products you receive timely and easy to interpret?

_____
_____
_____

12. Does utilizing the VAMOSC system to obtain cost data make your job easier? Why? Why not?

_____
_____
_____

13. Does it help increase your job efficiency?

_____
_____
_____

14. Do you find the system to be user-friendly?

_____

_____

_____

15. Is it convenient to use?

_____

_____

_____

16. Are there obstacles which prevent you from utilizing the system?

_____

_____

_____

17. What are your feelings about the VAMOSC system in relation to your job?

_____

_____

_____

18. How can the present system be improved to better serve your needs?

_____

_____

_____

19. Why do you feel the system is not utilized more within your
    organization?

_____

_____

_____

B. User Manuals

1. Do you have copies of the User Manuals, (AFR 400-31, Vol. I-IV) available to you?

    _____
    _____

2. Do you feel the User Manuals adequately explain how to use the VAMOSC system to acquire and interpret the data you need?

    _____
    _____
    _____
    _____

3. Are the procedures in the User Manuals for requesting data from WSSC, CSCS, and the C-E systems clear?

    _____
    _____
    _____

4. Do you have any recommendations that would improve the User Manuals?

    _____
    _____
    _____

C. Training

1. Have you received training on the VAMOSC System?

_____

_____

_____

2. What type of training did you receive and what was the time frame within which it took place?

_____

_____

_____

3. Did the training meet your needs?

_____

_____

_____

4. Do you feel that additional training is required for you to fully exploit the capabilities of the system?

_____

_____

_____

5. What type of training would you like?

_____

_____

_____

6. Where should training take place?

_____

_____

_____

7. Is refresher training necessary?

_____

_____

_____

APPENDIX B

PERSONNEL INTERVIEWED

2.1.1 INTERVIEWS

The following personnel were interviewed on the indicated date.

Date	Name	Office Symbol	Location
11/1/83	Roger Steinlage	HQ AFLC/ACMCI	Wright-Patterson AFB, Ohio
11/1/83	Steve Klipfel	HQ AFLC/ACMCE	Wright-Patterson AFB, Ohio
11/1/83	Lt. Ingram	ASD/YPLI	Wright-Patterson AFB, Ohio
11/2/83	Dr. Nate Sternberger	AFWAL/FIA	Wright-Patterson AFB, Ohio
12/7/83	Col. George Monahan	MMC	Sacramento Air Logistics Command McClellan AFB, CA.
12/7/83	Rich Gallaway	MMCRS	Sacramento Air Logistics Command McClellan AFB, CA.
12/7/83	Gordon Ray	MMCRACA	Sacramento Air Logistics Command McClellan AFB, CA.

12/7/83	Ed Wickenberg	MMCRACC	Sacramento Air Logistics Command McClellan AFB, CA.
12/7/83	Ed Gegney	MMCRAA	Sacramento Air Logistics Command McClellan AFB, CA.
12/7/83	Fred Libby	MMCRAC	Sacramento Air Logistics Command McClellan AFB, CA.
12/7/83	Earl Anderson	MMCE	Sacramento Air Logistics Command McClellan AFB, CA.
12/8/83	Paul Ventolieri	MMCRAB	Sacramento Air Logistics Command McClellan AFB, CA.
12/8/83	George Coleman	MMEA	Sacramento Air Logistics Command McClellan AFB, CA.
12/8/83	Ken Herzberg	MMCRABB	Sacramento Air Logistics Command McClellan AFB, CA.
12/13/83	David Wilson	2-3814	Boeing Aerospace Co., Seattle, WA.
12/13/83	George Herrold	2-3814	Boeing Aerospace Co., Seattle, WA.
12/13/83	Albert Olesberg	S-6621	Boeing Aerospace Co., Seattle, WA.
12/13/83	Richard Parks	S-1555	Boeing Aerospace Co., Seattle, WA.
12/13/83	Leonard Witowsky	FAA	Boeing Military Co., Seattle, WA.
12/13/83	Fred Crosetto	FAA	Boeing Military Co., Seattle, WA.
12/14/83	Peter Gerrard	8741/AW	Northrop Corp. Hawthorne, CA.
12/14/83	Fernando Heyer	8741/AW	Northrop Corp. Hawthorne, CA.

12/14/83	Michael McCarthy		Northrop Corp. Hawthorne, CA.
12/15/83	James Daniledes		Lockheed Corp., Burbank, CA.
12/15/83	Dalen Horning		Lockheed Corp., Burbank, CA.
12/15/83	Marlon Guess		Lockheed Corp., Burbank, CA.
12/16/83	Bernie Morris		Rockwell Corp., El Segundo, CA.
12/19/83	Col. L. Takamura	AFAFC/CWM	Lowry AFB, Denver, CO.
12/19/83	Capt. P. Larson	AFAFC/CWM	Lowry AFB, Denver, CO.
12/19/83	Beth Forgie	AFAFC/CWML	Lowry AFB, Denver, CO.
12/19/83	Capt. Draper	AFAFC/CWML	Lowry AFB, Denver, CO.
12/20/83	Maj. J. Bradney	AFAFC/CWMI	Lowry AFB, Denver, CO.
1/5/84	John Rosso	HQ AFSC/ALPA	Andrews AFB, MD.
1/6/84	Lt. Col. Beckner	HQ USAF/AFLEX	Washington, D.C.
1/6/84	Lt. Col. Devers	OSD/PA&E	Washington, D.C.
1/6/84	Wright Carter	HQ USAF/LEYE	Washington, D.C.
1/6/84	Lt. Col. Owen	HQ USAF/ACMC	Washington, D.C.
1/6/84	John Janesieski	HQ USAF/LEYM	Washington, D.C.
1/13/84	Capt. T. Gill	MMCMA	Sacramento Air Logistics McClellan AFB, CA.
1/25/84	Al Frager		Information Spectrum Inc. Arlington, VA.

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VAMOSC

Training

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Since its inception, the Air Force portion of the VAMOSC program has had a problem with acceptance by the user community. Many reasons have been hypothesized for lack of use of the system, but no formal study had been undertaken to determine the reasons for non-use and to recommend solutions. Therefore, the Air Force (AF) VAMOSC Program Office contracted with the Educational Systems Program of ARINC Research Corporation to complete two tasks: first, to conduct a Training Needs Analysis, and second, to develop

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20. a formal Training Plan for the VAMOSC program. In examining the data collected during the interview, it became clear that the people who needed to know the most about the VAMOSC program, actually knew the least. A comprehensive training program will do much to alleviate the reasons for nonutilization of VAMOSC: lack of knowledge of the VAMOSC program, lack of data, and lack of confidence in the data. In order to establish VAMOSC as a credible program within the user community it is important that open communications be maintained between the VAMOSC Program Office and the users. If training is developed and updated as the VAMOSC system matures, the user will be able to selectively and positively use VAMOSC to support his job functions.

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